



Ministry of Education
SINGAPORE



MINISTRY OF HEALTH
SINGAPORE

Joint Grant Call

2025 Call for Proposals

Submit EOI by: 20 February 2025, 1700

HP Joint Secretariat:

HP Programme Office
Agency for Science, Technology & Research
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Science of Learning Office
Email: MOE_Sol@moe.gov.sg

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1. BACKGROUND

- 1.1. Human capital is Singapore's most valuable resource. With persistently low birth rates, ageing population, and a declining workforce, it is a national priority for Singapore to optimise each individual's potential from young and throughout life.
- 1.2. The vision of Human Potential (HP) research is to advance HP through health and biomedical science, and Science of Learning research, and apply the research knowledge to support the optimal development at critical junctures of an individual's life course.
- 1.3. There are many opportunities to optimise Human Potential throughout the entire life course, but the nature and relative impact of interventions are likely to differ at various stages. There are three (3) strategic focus areas in which the HP programme centered around:
 - a) **Early Life** focusing on improving child's physical, cognitive and socio-emotional development and maternal health and well-being in order to optimise developmental outcomes and set the right trajectory for an individual's life course.
 - b) Function and performance during peri-pubertal, adolescence and adulthood with a focus on **Science of Learning** to improve learning outcomes and upskilling of workers; and
 - c) **Healthy and meaningful longevity** to detect and prevent/delay physical and cognitive decline and transform the ageing experience.

2. OBJECTIVES AND SCOPE OF HP JOINT GRANT CALL

- 2.1. This grant call aims to seed and foster multi-disciplinary scientific research in selected health, cognition, and wellbeing areas. It also aims to promote cross-institutional collaborative efforts among researchers and policymakers, while addressing cross-cutting problem statements that straddle or include at least two stages in the life course (i.e., early life, early childhood, adolescence, adulthood, and older age).

2.2. The research areas of interest include the following:

Themes	Possible Research Areas
Lifelong Learning and Cognitive Function	a. Focus on mechanisms that enhance cognitive functions throughout life, from early childhood to late adulthood/old age. A joint project could potentially help to identify lifelong learning and mental stimulation strategies in earlier part of life that may mitigate or delay cognitive decline in later part of life.
Digital and Social Media	a. Investigate the effects of digital and social media usage on individuals across the life course and at key transition points, and examine how these influences shape developmental trajectories, behaviour, mental health, neurodevelopment, neurodegeneration, and social interactions. b. Develop tools to capture data from different sources such as screen use app and biomarkers (i.e., beyond self-reports) and accurately predict problematic cases of digital and social media usage.
Resilience across life course for socio-emotional development and mental wellness	a. Develop tools to accurately and reliably measure resilience in individuals from their early years of development through old age. Results from the tools can be used as indicators of resilience for individuals in our local population and across contexts. Building resilience is essential because it helps individuals and communities adapt and thrive in the face of challenges, adversity, and change. b. Develop age-appropriate screening tools to accurately and reliably identify individuals at-risk of socio-emotional development or mental wellbeing for support and/or intervention. Current research tools tend to be self-reports and are not precise in identification.
Data sharing and harmonisation as a research enabler	a. Build integrated tools/components to support data sharing and harmonization, and develop a common database with harmonized data across diverse age ranges, from early life to ageing cohorts. This will multiply the impact of research carried out by individual teams.

Please refer to Appendix 3 for challenge statements from relevant ministries and agencies.

2.3. Where possible, researchers should leverage **health and biomedical science (HBMS), social science and Science of Learning research capabilities** in the proposals.

2.4. The research proposal must involve at least two HP focus areas out of three (i.e. Early Life, Science of Learning, and Healthy and Meaningful Longevity), and should articulate the proposal’s potential translational impact to address important gaps in national policy and practice in health, education, and social services. Applicants shall clearly articulate the underlying time for translation, the impact on optimal health/societal/economic outcomes, the efficiency and overall impact where possible.

3. ELIGIBILITY CRITERIA

- 3.1. Researchers from all Singapore-based institutions of higher learning (IHLs), public sector agencies, public hospitals, public healthcare institutions and CREATE entities are eligible to apply. Funded R&D projects must be conducted in Singapore.
- 3.2. Grant proposals should only be submitted by one lead Principal Investigator (PI).
- 3.3. The lead PI must have a minimum of 0.75 FTE primary appointment with an eligible organisation and have a laboratory or research programme that carries out research in Singapore.
- 3.4. Mid or senior investigators can apply. Lead PI must be an independent investigator (with PI status in institution) with a demonstrated track record of research, as evidenced by the award of nationally competitive funding (international funding to be considered on a case-by-case basis), substantial publication record in the past 3 years.
- 3.5. Proposed research should not be already funded by other local or international grants or funding schemes. Research Proposals being considered for funding by other agencies will not be considered under the present call. PIs will need to declare other funding sources during the application.
- 3.6. Researchers who have primary/joint appointments in such publicly funded institutions can participate in the call as Co-PIs/Co-Is. MOE officers with expertise relevant to the project can participate as Co-PIs/Co-Is with justifications on the role. Researchers salaried by project grants cannot be Co-PIs/Co-Is.
- 3.7. Local private or foreign organisations may only participate as a Collaborators. Successful applicants are not allowed to contract out whole or part of the funded research to any Co-investigator or Collaborator whether they are local or international.

4. PROPOSAL REQUIREMENTS AND FUNDING

- 4.1. Singapore-based IHLs, public sector agencies and public healthcare institutions can qualify for up to 100% funding support of approved qualifying direct and indirect costs of a project. Funding support for indirect costs of up to 30% of the total approved qualifying direct costs will be allowed, subjected to the approval from HP Joint Secretariat.
- 4.2. Projects can be up to 3 years in duration, with budgets up to \$2M each (including indirect research costs). Final funding support and amount will be at the sole and exclusive discretion of the HP Joint Secretariat based on the scope and projected outcomes of the research.
- 4.3. Applicants shall comply with national regulations.
- 4.4. All R&D work must be conducted in Singapore, and all assets acquired with the funding must be located in Singapore and maintained within the control of the Institutions.
- 4.5. Intellectual Property (IP) management: All researchers and research organisations shall follow and apply the National IP Protocol principles and framework.
- 4.6. Subject to restrictions related to research ethics, confidentiality and intellectual property, all data generated from research funded by HP Joint Secretariat should be made available to user communities at the earliest feasible opportunity. This would generally be no later than the release through publication of the study's main findings, or in line with established best practiced

in the respective fields. A copy of the publication may be deposited in the Host Institution's Open Access repository or any other subject Open Access repository, in accordance with the Host Institution Open Access policy.

5. APPLICATION

- 5.1. This call for proposals has a two-stage process. Lead PI is required to submit an Expression of Interest (EOI) in the first stage, with shortlisted applicants invited to submit a full proposal during the second stage.
- 5.2. The Lead PI will be required to submit the EOI and their CV online via FormSG (link available at: <https://form.gov.sg/6761543555715092a9f1db7e>). Late submissions or submissions from individual applicants without endorsement from the Host Institution will not be accepted.
- 5.3. The Research Administrative Office from IHLs or Research Entities are required to ensure information submitted by their researchers for the grant call are compiled according to the requirements set out. Incomplete submissions will be rejected.
- 5.4. Applicants are to note that where relevant privileged or confidential information is needed to help convey a better understanding of the project, such information should be disclosed and must be clearly marked in the proposal.
- 5.5. Applicants may direct queries by email to if questions are not addressed in the FAQ section of the grant call.
 - 5.5.1. A*STAR: hppo@hq.a-star.edu.sg
 - 5.5.2. MOE: MOE_Sol@moe.gov.sg
 - 5.5.3. NMRCO: tricia.teosk@mohh.com.sg

6. SELECTION AND AWARD PROCESS

6.1. Submitted EOIs will be subjected to evaluation by the HP Joint Secretariat. Submitted proposals will be subjected to review by international and local scientific experts, as well as an evaluation panel. Where appropriate, proposals may also be sent to relevant national agencies and industry resource persons for additional review. Privileged or confidential information shall be clearly marked as such in any of the submission documents.

6.2. Proposals will be evaluated based on the following criteria:

- a) Contribution to Grant Objectives
 - i. Relevance, scientific value, and amount of contribution of proposed research in addressing the challenge(s) posed.
- b) Scientific Excellence and Innovation
 - i. Quality and significance of proposed research, including the potential for breakthrough/innovation to advance knowledge and understanding within its own field or across different fields
- c) Potential for Deployment in Singapore (primary)
 - i. Potential and feasibility for application and translation of research outcomes/solutions with local agencies or organisations (public and/or private sectors) and even beyond Singapore.
- d) Execution Strength and Technical Competency of Research Team
 - i. Quality and delivery of execution plans.
 - ii. Quality and track record of research team, including likely multi-disciplinary research, synergy in delivering research and potential for international leadership.

6.3. Shortlisted applicants may be requested to present their full proposal at the Grant Evaluation Panel (GEP) Meeting in Q3 2025. Lead PIs will need to be available to present. Feedback from the evaluation process will be shared with shortlisted applicants.

6.4. All projected output and achievements of the proposed research are expected to be commensurate with the level of funding requested. The HP Joint Secretariat may require proposals to be revised or combined as it sees fit to enhance research outcomes, ensure competitiveness, facilitate integration of research concepts and technologies, and optimise resources. The HP Joint Secretariat is under no obligation to award research grant in whole or in part to any proposal and its decision on project and funding support will be final and shall be abided by the applicants.

6.5. The HP Joint Secretariat bears the sole and exclusive discretion for the selection of reviewers and evaluators and shall not be liable for the release of information concerning proposals to third parties by individuals involved in the review process. Should circumstances arise, the HP PO reserves the right to modify the review process.

6.6. Applicants shall agree that they shall not take legal action against the HP Joint Secretariat, the Peer Reviewers, or any members of the evaluation panel in relation to their role in evaluating and deliberating the project proposal.

6.7. A Letter of Award will be sent to the Host Institutions of successful applicants, as named in the proposal.

6.8. Successful applicants will be notified of in-principle approval for the award of the grant in **December 2025**.

APPENDIX 1 – NON-FUNDABLE DIRECT COST OF RESEARCH

Information on non-fundable direct costs of research is appended in the tables below. This list is based on inter-agency guidelines. Applicants are to note that the list is subjected to revision.

Type of Expenses	Description
Salaries of Lead PI / Investigators / Visiting Professors & researchers/ Collaborators/ general administrative support staff	Not allowable.
Teaching buy outs	Not allowable for the hiring of substitutes to perform the Investigators' teaching duties.
Undergraduate stipend and tuition support	Not allowable.
Costs related to general administration and management.	Not allowable. This includes common office equipment, such as furniture and fittings, office software, photocopiers, scanners and office supplies.
Costs of office or laboratory space	Not allowable. This includes renovation/outfitting costs, rent or depreciation of buildings and equipment, and related expenditures such as water, electricity, waste disposal and building/facilities maintenance charges.
Personal productivity tools & communication expenses	Not allowable, unless the use of mobile phones and other form of smart devices were indicated in the methodology for the Research.
Audit fees (Internal and external audit) and Legal fees	Not allowable.
Entertainment	Not allowable.
Refreshment	Not allowable, unless this is related to a hosted conference or workshop.
Fines and Penalties	Not allowable.
Patent Application	Not allowable. This includes patent application filing, maintenance and other related cost.
Professional Membership Fees	Not allowable.
Staff retreat and team-building activities.	Not allowable.

APPENDIX 2 – FREQUENTLY ASKED QUESTIONS

Eligibility

1. What is the difference between a Co-Investigator and a Collaborator?

Unlike Co-Investigators, Collaborators are not permitted to receive, directly or indirectly, any part of the funding, whether in cash or in the form of assets acquired using the funding or otherwise.

Partnerships

1. Must intellectual property be shared?

Best practices should be observed when determining ownership of intellectual property, subject to Singapore laws, regulations, and policies governing the parties involved. Investigators are responsible for executing and managing research collaboration agreements (RCAs), where and when applicable, to deliver approved project milestones in a timely fashion. RCAs are not required for grant submission.

2. How can a non-eligible research organisation participate?

Please refer to the info sheet for eligible research organisations. Non-eligible research organisations may participate as a Collaborator. Collaborators may benefit from participating by providing in-kind or cash contributions to the project in exchange for intellectual property ownership, as delineated in a RCA. The party that is eligible for grant funding may use the funding to offset its contributions in the collaboration.

APPENDIX 3 – CHALLENGE STATEMENTS FROM MINISTRIES AND AGENCIES

The following are examples interested applicants can take reference from. The HP Joint Secretariat invites applications as long as they cover at least two stages in the life course (Para 2.1) and are within the research areas of interest (Para 2.2).

Research area 1: Lifelong Learning and Cognitive Function

Challenge Statements
<ol style="list-style-type: none">a. What are the developmental trajectories for executive functioning skills? How could teachers leverage these trajectories to improve classroom teaching and student learning?b. How do early life experiences, such as parenting styles, SES factors and early childhood education, impact the development of executive function?c. How can we effectively enhance the learning of children from adverse home backgrounds, to maximise their potential?d. How does cognitive load influence children’s ability to learn language and numeracy? How to optimise learning experiences to minimise cognitive overload?e. How do bilingual children process languages differently in the brain compared to monolingual children?f. What types of interventions have been shown to improve executive function in children with learning difficulties or developmental disorders?g. What types of interventions (e.g., in the classroom, in the community) effectively promote children’s holistic development (e.g., cognitive function, social and emotional development, mental well-being)?h. What is the impact of cognitive decline for adults across different segments and sectors, and how can this impact be mitigated?i. Are there intervention strategies that can help mid-career workers (MCWs) learn better, taking into consideration adults’ cognitive function? How can we better motivate MCWs to up/re-skill?j. International literature has demonstrated the impact of employment on the rate of cognitive decline in seniors. However, some seniors may have stepped out of the workforce early due to caregiving, health, or other reasons. How can adult learning and/or adult volunteerism provide the same level of cognitive stimulation?
Science of Learning for Adults with Disabilities (<i>preliminary</i>) <ol style="list-style-type: none">1. Examine the science of adult learning for persons with disabilities, in particular those with intellectual disabilities and autism<ul style="list-style-type: none">• Explore technologies which could improve PwDs’ access to learning, including those with sensory and developmental disabilities.2. Examine the effective policies and interventions to support lifelong learning for adults with disabilities

Research area 2: Digital and Social Media

Challenge Statements

- a. How can we effectively leverage serious games and gamification to improve the physical and mental health of children and youth? Understanding the impact of these innovative approaches will not only provide valuable insights into their efficacy but also strengthen the potential adoption of serious games and gamification as tools for health promotion and intervention. This challenge calls for robust research and actionable solutions to harness the potential of gamification in fostering healthier lifestyles and mental well-being among the younger population.
- b. What is the impact of digital technologies (e.g., AR, wearable technology, real-time feedback facilitated by digital technology) on affective learning and development (e.g., character, social-emotional wellbeing)?
- c. How can positive relationships and community be built in a technology-mediated learning environment (e.g., VR, AR, one-to-one learning devices)?
- d. How do VR/AR tools affect cognitive, social and emotional development in children and adolescents?
- e. How can technology be used effectively to support children with additional needs (e.g., provide timely and accurate feedback)?
- f. How can the use of technological tools impact children's motivation in learning and their acquisition of Mother Tongue Language?
- g. How does the development of computational thinking in children impact their holistic development (e.g., numeracy, literacy, social and emotional competencies)?
- h. How does early exposure to digital devices and screen time impact brain function and learning in young children?
- i. What are the archetypes of adolescents who are at the highest risk of excessive screen use?
- j. How can we enhance self-regulation in children and adolescents related to digital technology use? How can we reduce the online disinhibition effect among children and adolescents?
- k. How do youths perceive and respond to algorithms and AI manipulation in their digital experiences?
- l. What is the cognitive impact of Digitalisation/AI/GenAI on Adult Learners' learning/training, and how can this be measured and tracked, and used to enhance up/re-skilling efforts?
- m. Are there intervention strategies that can help adult learners better learn digital skills and thrive in the current digitalised workplace?
- n. What is the cognitive impact of social media use on seniors? How can digital and social media engagement amongst seniors be harnessed for bolstering their health?
- o. Are there intervention strategies that can support senior learners better master and keep up with digital technologies?

Research area 3: Resilience across life course for socio-emotional development and mental wellness

Challenge Statements

Current understanding of individuals' (e.g. both students and adults) lifestyle choices and their impact on social, emotional, and physical well-being is limited.

- a. What critical lifestyle patterns of individuals affect their wellbeing [e.g., sleep habits, digital engagement, physical activity, peer relationships, family life, leisure activities?]
- b. What is the human capital impact (with proposed metrics) of major adverse health episodes and living with/caring for chronic illness in Singapore, and what makes a difference in mitigating/recovering from this?
- c. How does the development of social and emotional competencies and promotion of mental wellness in the early years result in longer term gains by the individual, such as experiencing a smooth transition from preschool to primary school and even into adulthood (e.g., lower tendency of depression, lower crime rates)?
- d. How does the development of social and emotional competencies and promotion of mental wellness in the early years result in longer term gains by the individual, such as experiencing a smooth transition from preschool to primary school and even into adulthood (e.g., lower tendency of depression, lower crime rates)?
- e. What are the effects of resilience building interventions among children, adolescent and/or young adult population?
- f. What impacts/supports adult learners' social-emotional engagement in learning?
- g. What are the impact/benefits of resilience for adults' learning and careers and overall health outcomes?
- h. How can we build resilience in adult learners? Are there cognitive strategies that can improve socio-emotional development and mental wellness for adult learners?

Household Dynamics and Family Resilience (*preliminary*)

- a. Examine how individuals' capacity / skills in terms of socio-emotional development (e.g., problem solving skills, maintaining boundaries, mutual support behaviours etc) impact family resilience.
- b. Examine how relationships between family members (e.g. marital relations, parent-child relations, adult child-parent relations) interact with one another, and impact family resilience across life course, during key life transitions and stressors (e.g. health/unemployment shock).
- c. Examine the effective policies and interventions, community support (e.g., peer support, self-help resources etc), and optimal timepoints for upstream interventions to strengthen family resilience.
- d. Examine how work-life balance and allocation of household labour and caregiving needs within the families affect family resilience. Examine the effective policies and interventions relating to work-life balance and caregiving which help strengthen family resilience.